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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,602	04/02/2001	Susan S. Young	82297WFN	1205

7590

01/12/2005

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EXAMINER

TUCKER, WESLEY J

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,602

Applicant(s)

YOUNG, SUSAN S.

Examiner

Wes Tucker

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,8,9,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8,9,13 and 14 is/are allowed.
- 6) ☒ Claim(s) 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's response to the last Office Action, filed July 30, 2004 has been entered and made of record.

2. Applicant has canceled claims 1, 3-7, 10-12 and 15-16. Applicant has amended Claims 2, 8 and 13. No new claims have been added. Claims 2, 8-9, and 13-24 are pending.

3. Applicant's arguments have been fully considered but are not persuasive for at least the following reasons:

4. Claim 2 remains rejected under 35 U.S.C. 103 as being unpatentable over the combination of U.S. Patent 6,285,798 to Lee and U.S. Patent 5,467,404 to Vuylsteke. Applicant argues that the combination of Lee and Vuylsteke does not disclose a "mountain-view" presentation of image data and that there is a lack of motivation for the obvious combination of the references. However as best understood from the claim 2, the specification pages 12-15, and Figure 5, a mountain-view presentation is a representation where variations that occur are emphasized by creating peaks or mountains. Vuylsteke discloses this kind of representation (Figs. 10A and 10B). Fig. 10A is a plot of a line in an original image and 10B is a plot of that same line after the image has been contrast enhanced (column 14, lines 10-14). Where there is a relatively large contrast in the image, a mountain is formed, and the areas in between

Art Unit: 2623

where there is less contrast there are plateaus. Vuylsteke teaches that the contrast of subtle details will show improved perceptibility in comparison with the original image. Therefore it would have been obvious to one of ordinary skill in the art to use the plotted presentation as taught by Vuylsteke with the enhanced image of Lee in order to improve perceptibility of enhanced contrast. As far as motivation to combine the two references, the "mountain-view" representation is just a representation of image data that is known in the art as shown in Vuylsteke. One of ordinary skill in the art would use any representation of image data that is found useful. As to the argument that the same decomposition filter is used to generate both output images, this is not implied in the claim and is therefore irrelevant. The rejection of claim 2 is therefore made final.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U.S. Patent 6,285,798 to Lee and U.S. Patent 5,467,404 to Vuylsteke et al.

8. With regard to claim 2, Lee discloses a method for improving disease diagnosis comprising the steps of:

providing an input digital diagnostic image (Fig. 2, element 1);

generating a contrast enhancement presentation image (Fig. 2, element 50) by processing the digital diagnostic image using a decomposition filter bank (Fig. 2, element 20), a tone scale curve (Fig. 2, element 40), and contrast weight control signals (Fig. 2, element 30).

applying a decomposition filter bank to said digital diagnostic image to produce high contrast edge signals (column 10, lines 27-32);

Lee does not disclose generating a mountain-view presentation image having mountains and plateaus wherein mountains are the areas containing high contrast edges and plateaus are the areas containing low frequency components. Vuylsteke discloses a "mountain-view" presentation (Figs. 10A and 10B). Fig. 10A is a plot of a line in an original image and 10B is a plot of that same line after the image has been contrast enhanced (column 14, lines 10-14). Vuylsteke teaches that the contrast of subtle details will show improved perceptibility in comparison with the original image. Therefore it would have been obvious to one of ordinary skill in the art to use the plotted presentation as taught by Vuylsteke with the enhanced image of Lee in order to improve perceptibility of enhanced contrast.

Allowable Subject Matter

Claims 8, 9, 13, and 14 are allowed.

The following is an examiner's statement of reasons for allowance:

With regard to claim 8, U.S. Patent 6,285,798 to Lee discloses the invention as claimed with the exception of producing a mapping function wherein an output value T is large when the gradient amplitude at the coarse scale is moderate and the output value T is small when the gradient amplitude at the coarse scale is very small and very large and using the out put value T as a mask image. Neither Lee nor any of the prior art discloses or teaches this operation feature.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in the Office Action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2623

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wes Tucker whose telephone number is 703-305-6700. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703)308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wes Tucker

1-3-04


Jon Chang
Primary Examiner